

IN THE CLAIMS:

This listing of the claim will replace all prior versions and listings of claim in the present application.

Listing of Claims

Claims 1-35 (canceled).

36. (currently amended) A method for implementing an extensible network-attached storage in a system including a plurality of computers, at least one secondary storage apparatus having a storage medium, which stores data in units each being a block, in which said data is kept after shutting down a power source and an active network storage controller for inputting and outputting a block-based input/output (I/O) request between the computers and the storage medium;

wherein at least one application program is deployed in one of the computers processing data in units each being an object, said application program issues object-based I/O requests to said secondary storage apparatus, said method comprising the steps of:

receiving an object-based I/O request from one of the computers;

downloading an object access module describing how a requested object is stored in the secondary storage apparatus to the active network storage controller from one of the computers;

implementing the object access module to convert the object-based I/O request to a block-based I/O request;

sending the block-based I/O request to the secondary storage apparatus;

receiving a response to the block-based I/O request from the secondary storage apparatus; and
transmitting a response to the object-based I/O request.

37. (previously presented) A method according to claim 36, wherein said object access module obtains a data value or location of data in a storage unit corresponding to a specification, which is either an object, an object offset, an object offset size, or an object tag specifying the type of data to be retrieved.

38. (previously presented) A method according to claim 36, further according to claim 36, further comprising the steps of:

registering said object access module in said active network storage controller to provide the secondary storage apparatus with an object-based I/O function;

registering object description data, which indicates how application data is stored in the secondary storage apparatus, in the registered object access module; and

receiving in said secondary storage apparatus from the computer an object-based I/O request for accessing said application data.

39. (previously presented) A method according to claim 38, wherein said object description data is data for specifying an attribute or an inter-block reference based on an offset and size of said application data.

40. (previously presented) A method according to claim 38, wherein said object description data is data for specifying an attribute or an inter-block reference by a lexical analyzing program or a parser generating grammar of said application data.

41. (previously presented) A method according to claim 38, wherein said object description data is data for specifying a file format of said application data based on whether the data stored in a specific part of one or more storage units contain some specific value or pattern.

Claim 42 (canceled).